

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at line 3 of page 2 with the following amended paragraph:

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The following co-pending applications, which are filed the same day as this application, are hereby incorporated by reference: U.S. Application No. /09/680,120, entitled "Selecting a Server to Service Client Requests," and U.S. Application No. /09/679,720, entitled "Routing Client Requests to Back-End Servers."

Please replace the paragraph beginning at line 2 of page 8 with the following amended paragraph:

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Client requests for data may be redirected from one server to another. Some redirections occur because data has been either temporarily or permanently moved to a new server. In the prior art, redirections are sent to the client system that initiated the request and the client reissues the request to the server indicated in the redirection. Where a proxy requests data for a client, the proxy returns redirection responses to the client for processing. However, redirection according to the prior art proves to be inadequate for certain systems. For example, U.S. Application No. /09/679,720, filed on the same day herewith, entitled "Routing Client Requests to Back-End Servers," which is hereby incorporated by reference, describes the use of a front-end server to access content stored on one or more back-end servers. The specific back-end server storing requested content is unknown and transparent to the client.

Please replace the paragraph beginning at line 20 of page 9 with the following amended paragraph:

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Because replicated data may be stored on more than one server, the back-end server ghosting a folder is capable of identifying a list of back-end servers in a redirect response. However, prior art clients are unable to receive a list of servers in a redirect response. As a result, front-end servers add a front-end indicator to any requests they direct to back-end servers. If a back-end server receives a request with the front-end indicator, the back-end server knows

that a list may be returned. Returning a list of servers allows the front-end server to load balance requests across all back-end servers capable of servicing a particular request. U.S. Application No. 1 09/680,120, filed on the same day herewith, entitled "Selecting a Server to Service Client Requests," which is hereby incorporated by reference, describes how a particular back-end server may be identified to load balance requests. Otherwise, if the front-end indicator is not present, the back-end server returns a single back-end server in the redirect response. In one embodiment the front-end indicator is a string added to the standard HTTP "User-Agent" header and the server list is returned in an extended HTTP 305 Use Proxy redirect response. However, the present invention is not limited to the use of any particular HTTP headers or responses.

Please replace the paragraph beginning at line 3 of page 15 with the following amended paragraph:

Figure 2 shows a client system accessing email content that has moved from one back-end server to another. Email server A 250 includes mailbox storage A 252 containing email client A new mailbox 254, whereas email server B 260 includes mailbox storage B 262 containing email client A old mailbox 264. Email server C 270 includes mailbox storage C 272. Email server A 250, email server B 260, and email server C 270 are examples of back-end servers. Email client A new mailbox 254 and email client A old mailbox 264 are examples of resources available through front-end server 240. Global catalog server 230 provides front-end server 240 with current information regarding the content stored at each of the available back-end servers. Additionally, the front-end server 240 is stateless and does not require, for example, a hard drive for storing program data. U.S. Application No. 1 09/680,120, filed on the same day herewith, and entitled "Selecting a Server to Service Client Requests," which is hereby incorporated by reference, provides greater detail with respect to how a particular back-end server may be identified and how a front-end server operates.

Please replace the paragraph beginning at line 23 of page 16 with the following amended paragraph:

(15) In contrast to the prior art, when front-end server 240 receives the redirect response, front-end server 240 reissues the request for email content to server A 250 rather than passing the redirect response back to email client A 210. As shown in Figure 2, email client A 210 may only access email content through front-end server 240. A redirect response indicating that server A 250 stores the email content from email client A 210 would be of no benefit to email client A 210 because server A 250 cannot be reached directly. Furthermore, such a redirect response may confuse email client A 210 because no request for content was made to server B 260, and therefore a redirect response from server B 260 is unexpected. Front-end server 240 overcomes these problems with prior art redirection by processing the redirect response without any indication to email client A 210 that any redirection has occurred. U.S. Application No. 10/09/679,720, filed on the same day herewith, entitled "Routing Client Requests to Back-End Servers," which is hereby incorporated by reference, provides further details on the operation of front-end server 240 in requesting email content for email client A 210. The present invention should not be interpreted as requiring that back-end server only be accessible through a front-end server.

Please replace the paragraph beginning at line 9 of page 19 with the following amended paragraph:

(16) Global catalog server 330 identifies back-end server 350, back-end server 360, and back-end server 370, in response to a request for the contents of Folder A 392 from front-end server 340. If the hashing operation identifies back-end server 350 or back-end server 360, the request is directed to the identified back-end server as described above. But, if back-end server 370 is identified, front-end server 340 must perform additional work in order to direct the request to a back-end server that can satisfy the request because the requested content is ghosted. When front-end server 340 directs the request to back-end server 370, back-end server 370 generates a redirect response. The contents of the redirect response depend on whether or not front-end 340 has modified the request to indicate that the response is from a front-end server. If so, the

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redirect response includes a list of back-end servers that can satisfy the request for the ghosted folder. Otherwise, the redirect response includes a single back-end server capable of satisfying the request. U.S. Application No. ~~10~~09/680,120, filed on the same day herewith, and entitled "Selecting a Server to Service Client Requests," which is hereby incorporated by reference, provides additional information on identifying a back-end server when public content is ghosted on a back-end server.
